

II. Listing of Claims

Below is the entire set of pending claims pursuant to 37 C.F.R. §1.121(c)(3)(i).

1. (Currently Amended) ~~A method of generating a stereoscopic image of a scene, the method comprising:~~

~~--defining at least one first region of a scene;~~

~~forming at least one first image pair, wherein the or each said first image pair comprises a first image of at least a part of a said first region of said scene when viewed from a first location, and a second image of at least a part of said first region when viewed from a second location, spaced from said first location;~~

~~carrying out a first mapping process on at least one said first image pair to generate a respective first part of a display image pair; defining at least one second region of said scene;~~

~~forming at least one second image pair, wherein the or each said second image pair comprises a third image of at least a part of a said second region of said scene when viewed from a third location, and a fourth image of at least a part of said second region when viewed from a fourth location, spaced from said third location;~~

~~carrying out a second mapping process on at least one said second image pair to generate a respective second part of said display image pair; and~~

~~combining the or each first and second part of said display image pairs to form said display image pair, said display image pair being adapted to provide a stereoscopic image of said first and second regions of said scene; wherein an object having a predetermined depth in a viewing direction in a said first region has a first perceived depth and an object having said predetermined depth in a viewing direction in a said second region has a second perceived depth, different from said first perceived depth, when said stereoscopic image is viewed in stereo.~~

A method of generating a stereoscopic image of a scene, the method comprising:

defining a first region of the scene;
forming a first image pair, wherein the first image pair comprises:
a first image of a first part of the first region as perceived from a first location;
and
a second image of the first part of the first region as perceived from a second location;
wherein the second location is spaced from the first location by a first offset distance;
performing a first mapping process on the first image pair to generate a first part of a display image pair;
defining a second region of the scene;
forming a second image pair, wherein the second image pair comprises:
a third image of a second part of the second region as perceived from a third location; and
a fourth image of the second part of the second region as perceived from a fourth location;
wherein the fourth location is spaced from the third location by a second offset distance; and further wherein the first and second offset distances are different;
performing a second mapping process on the second image pair to generate a second part of the display image pair; and
combining the first part of the display image pair and the second part of the display image pair to form a combined display image pair, said combined display image pair being adapted to provide a stereoscopic image of the first and second regions of the scene, wherein an object having a predetermined depth in a viewing direction in the first region has a first perceived depth and a second object having the predetermined depth in a second viewing direction in the second

region has a second perceived depth, the second perceived depth having a perceived displacement from the first perceived depth.

2. (Currently Amended) A method according to claim 1 further comprising:
defining ~~at least one~~ a third region of ~~said the~~ scene;
forming ~~at least one~~ a third image pair, wherein the ~~or each said~~ third image pair comprises:
a fifth image of ~~at least a~~ third part of ~~a said the~~ third region of ~~said scene when viewed as perceived~~ from a fifth location;
and a sixth image of ~~at least a~~ third part of ~~said the~~ third region ~~when viewed as perceived~~ from a sixth location;
wherein the sixth location is spaced from said the fifth location by a third offset distance, and further wherein the first and third offset distances are different;
performing a third mapping process on ~~at least one said the~~ third image pair to generate a ~~respective third part of said the~~ display image pair; and
combining the ~~or each~~ third part of ~~said the~~ display image pair with the ~~or each first and second part of said combined~~ display image pairs to form ~~said a second combined~~ display image pair, ~~said the second combined~~ display image pair being adapted to provide a stereoscopic image of ~~said the~~ first, second and third regions of ~~said the~~ scene; wherein ~~an~~ a third object having ~~said the~~ predetermined depth in a third viewing direction in ~~a said the~~ third region has a third perceived depth, the third perceived depth having a perceived displacement different from at least said the first perceived depth, ~~when said stereoscopic image is viewed in stereo.~~
3. (Currently Amended) A method according to claim 1 ~~or 2~~, wherein the scene is real.

4. (Currently Amended) A method according to claim 1~~any one of the preceding claims~~, wherein ~~said~~the first, second, third and fourth locations are located in a plane.

5. (Currently Amended) A method according to claim 1~~any one of the preceding claims~~, wherein ~~each~~the first and second regions ~~is~~are defined by ~~its~~their distance from at least one of the first, second, third and fourth~~said~~ locations.

6. (Currently Amended) A method according to claim 1~~any one of the preceding claims~~, wherein the first perceived depth ~~in each region~~ is determined by the distance between the first and second locations; and wherein

the second perceived depth is determined by the distance between the third and fourth locations~~from which the respective image pairs are viewed~~.

7. (Currently Amended) A method according to claim 1~~any one of the preceding claims~~, further comprising:

dividing the first image pairs into a plurality of image pair elements;

dividing the second image pair into a second plurality of image pair elements;

~~and~~ determining the distance in the scene of each of the plurality of the image pair elements from a position between the first and second~~respective~~ locations ~~from which the image pair was viewed~~, to determine which of the first and second regions ~~that~~each element is in; and

determining the distance in the scene of each of the second plurality of the image pair elements from a position between the third and fourth locations, to determine which of the first and second regions each element is in.

8. (Currently Amended) A method according to claim ~~6~~7, further comprising:

~~discarding any of the plurality of image pair elements from image pairs which are not from their respective first regions; and~~

~~discarding any of the second plurality of image pair elements not from the second region.~~

9. (Cancel) ~~A method of generating a stereoscopic image of a scene, substantially as hereinbefore described with reference to the accompanying drawings.~~

10. (Currently Amended) A computing program adapted to carry out a method according to claim 1 ~~any one of the preceding claims.~~

11. (Currently Amended) ~~An apparatus for generating a stereoscopic image of a scene, the apparatus comprising:~~

~~--at least one first image forming device for forming at least one first image pair, wherein the or each said first image pair comprises a first image of at least a part of a first region of said scene when viewed from a first location, and a second image of at least a part of said first region when viewed from a second location, spaced from said first location;~~

~~at least one first mapping device for carrying out a first mapping process on at least one said first image pair to generate a respective first part of a display image pair;~~

~~at least one second image forming device for forming at least one second image pair, wherein the or each said second image pair comprises a third image of at least a part of a second region of said scene when viewed from a third location, and a fourth image of at least a part of said second region when viewed from a fourth location, spaced from said third location; and~~

~~at least one second mapping device for carrying out a second mapping process on at least one said second image pair to generate a respective second part of said display image pair; at least one first image combining device for combining the or each first and second part of said display image pairs to form said display image pair, said display image pair being adapted to~~

~~provide a stereoscopic image of said first and second regions of said scene; wherein an object having a predetermined depth in a viewing direction in a said first region has a first perceived depth and an object having said predetermined depth in a viewing direction in a said second region has a second perceived depth, different from said first perceived depth, when said stereoscopic image is viewed in stereo.~~

An apparatus for generating a stereoscopic image of a scene, the apparatus comprising:
a first image forming device for forming a first image pair, wherein the first image pair comprises:

a first image of a first part of the first region as perceived from a first location;
and

a second image of a first part of the first region as perceived from a second location;

wherein the second location is spaced from the first location by a first offset distance;

a first mapping device for performing a first mapping process on the first image pair to generate a first part of a display image pair;

a second image forming device for forming a second image pair, wherein the second image pair comprises:

a third image of a second part of the second region as perceived from a third location; and

a fourth image of a second part of the second region as perceived from a fourth location;

wherein the fourth location is spaced from the third location by a second offset distance; and

further wherein the first and second offset distances are different; and

a second mapping device for performing a second mapping process on the second image pair to generate a second part of a display image pair; and

a first image combining device for combining the first part of the display image pair and the second part of the display image pair to form a combined display image pair, said combined display image pair being adapted to provide a stereoscopic image of the first and second regions of the scene, wherein an object having a predetermined depth in a viewing direction in the first region has a first perceived depth and a second object having the predetermined depth in a second viewing direction in the second region has a second perceived depth, the second perceived depth having a perceived displacement from the first perceived depth.

12. (Currently Amended) ~~An apparatus according to claim 11 further comprising:~~

~~--at least one third image forming device for forming at least one third image pair, wherein the or each said third image pair comprises a fifth image of at least a part of a third region of said scene when viewed from a fifth location, and a sixth image of at least a part of said third region when viewed from a sixth location, spaced from said fifth location;~~

~~at least one third mapping device for carrying out a third mapping process on at least one said third image pair to generate a respective third part of said display image pair; and~~

~~at least one second image combining device for combining the or each third part of said display image pair with the or each first and second part of said display image pairs to form said display image pair, said display image pair being adapted to provide a stereoscopic image of said first, second and third regions of said scene; wherein an object having said predetermined depth in a viewing direction in a said third region has a third perceived depth different from at least said first perceived depth, when said stereoscopic image is viewed in stereo.~~

An apparatus according to claim 11 further comprising:

a third image forming device for forming a third image pair, wherein the third image pair comprises:

a fifth image of a third part of the third region as perceived from a fifth location;
and

a sixth image of a third part of the third region as perceived from a sixth location;
wherein the fifth location is spaced from the sixth location by a third offset
distance; and

further wherein the first and third offset distances are different; and

a third mapping device for performing a third mapping process on the third image pair to
generate a third part of a display image pair; and

a second image combining device for combining the combined display image pair and the
third part of the display image pair to form a second combined display image pair, said second
combined display image pair being adapted to provide a stereoscopic image of the first, second
and third regions of the scene, wherein an object having a predetermined depth in a viewing
direction in the first region has a first perceived depth and a second object having the
predetermined depth in a second viewing direction in the second region has a second perceived
depth and wherein a third object having the predetermined depth in a third viewing direction in
the third region has a third perceived depth, the third perceived depth having a perceived
displacement from the first perceived depth.

13. (Currently Amended) An apparatus according to claim 11 ~~or 12~~, wherein the scene is
real.

14. (Currently Amended) An apparatus according to claim 13, wherein at least one of
~~said~~ the first image forming device and the second image forming device comprises a camera.

15. (Currently Amended) An apparatus according to claim 13 ~~or 14~~, wherein at least one of the first said mapping device, the second mapping device, and at least one said the imaging combining device comprises a computing device.

16. (Currently Amended) An apparatus according to claim 11 ~~or 12~~, wherein the scene is simulated.

17. (Cancel) ~~An apparatus according to claim 16, wherein at least one said image forming device, at least one said mapping device and at least one said imaging combining device comprise a computing device.~~

18. (Cancel) ~~An apparatus for generating a stereoscopic image of a scene substantially as hereinbefore described with reference to the accompanying drawings.~~

19. (Currently Amended) A stereoscopic image comprising:

~~at least one~~ a display image pair having:

~~at least one~~ a first part, the first part representing ~~at least one~~ first region of a scene, and

~~at least one~~ a second part, the second part representing ~~at least one~~ second region of ~~said the~~ scene[[,]];

~~wherein when at least one said display pair are viewed in stereo the display image pair are operable to provide a stereoscopic image of the first and second regions of the scene, wherein an object having a predetermined depth in a viewing direction in a said the first region has a first perceived depth and an second object having said the predetermined depth in a second viewing direction in a said the second region has a second perceived depth, the second perceived depth having a perceived displacement different from said the first perceived depth.~~

20. (Currently Amended) A method of generating a stereoscopic image of a scene, the method comprising:

[[--]]defining at least one first region of the scene and at least one second region of ~~a~~ the scene; and

generating at least one first stereoscopic image of ~~said the~~ first region of the scene and second regions of ~~said the~~ scene wherein an object having a predetermined depth in a viewing direction in ~~a said the~~ first region has a first perceived depth and ~~an a second~~ object having ~~said the~~ predetermined depth in a viewing direction in ~~a said the~~ second region has a second perceived depth, the second perceived depth having a perceived displacement different from said the first perceived depth, ~~when said stereoscopic image is viewed in stereo.~~